

Montana Department of Environmental Quality
Permitting and Compliance Division
Waste and Underground Tank Management Bureau
P.O. Box 200901
Helena, Montana 59620-0901

Draft Environmental Assessment

ConocoPhillips Company
Billings Refinery
401 S 23rd Street
Billings, Montana 59101

Montana Hazardous Waste Permit Number MTHWP-02-01

Legal Location

Northwest ¼ of Section 2, Township 1 South, Range 26 East in Yellowstone County, Montana

Purpose of the EA

The Montana Department of Environmental Quality (DEQ) is required under the Montana Environmental Policy Act (MEPA) to conduct an environmental assessment (EA) on the proposed action described in the next section. An EA documents: 1) all reasonable alternatives to DEQ's action; and 2) outlines the potential impacts to the human environment resulting from DEQ's action and the reasonable alternatives to that action.

Based on the impact analysis and professional judgment, DEQ makes a decision on the proposed action and summarizes the decision in the EA. If the decision significantly impacts the human environment then a more detailed environmental review, called an environmental impact statement, must be conducted by DEQ.

Public Comment Period

The public including interested citizens, DEQ, EPA, other governmental agencies, and the applicant are provided fifteen (15) days to review and comment on the draft EA and proposed action. **The comment period will extend from March 24, 2008 through April 8, 2008.** All persons wishing to comment on the Department's action and/or the draft EA must submit comments in writing to:

Denise A. Kirkpatrick
Solid and Hazardous Waste Specialist
Waste and Underground Tank Management Bureau
Montana Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901

All written comments must be received by the DEQ on or before April 8, 2008 for consideration. Please contact Denise A. Kirkpatrick at (406) 444-3983 or the address listed above for further information.

Description of Action

On February 19, 2008, the DEQ received a request from ConocoPhillips Company (ConocoPhillips) for disposal off-site of corrective action management unit (CAMU) eligible wastes from the South Oily Sludge Pits (SOSP) reuse project. The SOSP is a series of closed surface impoundments covered with an asphalt cap. ConocoPhillips intends to remove the cap and all soil to a depth of approximately six feet below ground surface. The remediation of the SOSP will facilitate industrial reuse of this area.

The SOSP reuse project's impacts were evaluated in a Final EA on February 27, 2006. This remedy was approved in a permit modification to Montana Hazardous Waste Permit Number MTHWP-02-01; the modification was effective on March 30, 2006.

The main activities of the approved remedy are listed below:

- Removal of the asphalt cap at the SOSP;
- Excavation of remediation waste at the SOSP and Area 4 Landfill;
- Off-site disposal of solid waste from the Area 4 Landfill including debris and catalyst;
- Soil management including segregation, sizing, and loading;
- Stockpiling non-impacted soil at the refinery pending reuse;
- Stockpiling contaminated soil in a temporary staging pile prior to treatment;
- Treatment of impacted soil exceeding regulatory and/or health based levels; and
- Reuse of soil meeting approved regulatory and health based levels. The soil will be used as backfill at the SOSP or elsewhere on the refinery.

Some soil at the SOSP is a listed hazardous waste because of its historical contact with listed hazardous waste. Under the February 19, 2008 request, the soil containing the listed hazardous waste is proposed for shipment off-site. There are no hazardous waste landfills in Montana permitted to receive this waste so the waste is proposed for shipment out of state.

This EA only addresses the DEQ's action to grant approval of the request for waste disposal if the conditions have been met in 40 CFR 264.555(a)(1) through (3), incorporated by reference in ARM 17.53.801. These conditions include the waste meets the definition of CAMU-eligible waste, principal hazardous constituents are identified and meet appropriate standards, and the landfill receiving the waste will be a hazardous waste permitted facility.

ConocoPhillips has proposed that the soil's principal hazardous constituents meet the adjusted treatment standard under 40 CFR 264.552(e)(4)(v)(E)(I). Based on in-situ soil data, ConocoPhillips has proposed that the adjusted standards are protective of human health and the environment because the soil has substantially met the treatment standards in 40 CFR 264.552(e)(4)(iv) (specifically the 10 times the Universal Treatment Standard requirement) and that soil leach tests and groundwater results indicate the contaminants are of low mobility. In addition, the engineering design of a landfill should provide long-term protection of human health and the environment.

ConocoPhillips has submitted sufficient information for the DEQ to determine that the waste is CAMU-eligible waste, to identify principal hazardous constituents and an appropriate standard, and to understand the landfill receiving the waste will be a RCRA hazardous waste permitted landfill. The DEQ is required by 40 CFR 264.555(c), incorporated by reference in ARM 17.53.801, to provide public notice and a reasonable opportunity for public comment before approving the request. A public notice was issued on March 24, 2008.

Objectives of Proposed Action

The DEQ's objective in approving the request, approving the request with modifications, or disproving the request is to comply with 40 CFR 264.555.

Alternatives Considered

This section describes the alternatives considered.

Alternative I – Granting ConocoPhillips' Request (Proposed Action)

The DEQ proposes to approve ConocoPhillips' request because the conditions in 40 CFR 264.555(a)(1) through (3) have been met. The DEQ is proposing to grant the request using the adjusted treatment standards under 40 CFR 264.552(e)(4)(v)(E)(1).

Under this alternative, soil remediation is conducted at the SOSP. Any hazardous waste generated is shipped off-site. This approval would allow waste to be shipped directly to a permitted hazardous waste landfill without further treatment.

Alternative II – Modified Treatment Standard

The DEQ may approve the request but require compliance with a different treatment standard in 40 CFR 264.552. The DEQ could require compliance with 10 times the Universal Treatment Standards for waste in 40 CFR 264.552(e)(4)(iv).

Under this alternative, soil remediation is conducted at the SOSP. Any hazardous waste generated must be shipped off-site for disposal; however, additional on-site handling and treatment may be necessary. This additional handling might include segregation so that waste that meets the standard may be shipped directly and waste that requires further treatment may be managed separately. The waste requiring further treatment might be treated on-site or shipped off-site for treatment and disposal.

Alternative III – No Action (Denial or Request)

The DEQ may deny ConocoPhillips' request pursuant to 40 CFR 264.555 if insufficient information was submitted. ConocoPhillips has submitted sufficient information; therefore, the DEQ does not believe the denial alternative is reasonable. This alternative was not considered further.

Under this alternative, the SOSP reuse project would likely proceed. Hazardous waste would be shipped off-site. Depending on the receiving facility, the soil may undergo further treatment prior to final disposal.

Scope of EA

The DEQ's authority for oversight of hazardous waste regulations is limited to Montana. Therefore, this EA only evaluates the potential impacts to the human environment resulting from DEQ's proposed action and the

reasonable alternatives at the location where the cleanup is taking place i.e. the ConocoPhillips refinery in Billings, Montana.

There are no treatment, storage or disposal facilities permitted in Montana to receive hazardous waste from another facility. Any hazardous waste generated from the SOSR reuse project will be shipped out of Montana. In evaluating ConocoPhillips' request, the DEQ must assume that the out of state landfill receiving the CAMU-eligible waste is a RCRA hazardous waste permitted landfill that meets the requirements of 40 CFR 264 Subpart N – Landfills.

The EPA Regional Administrator or State Official with jurisdiction at the landfill must approve placement of CAMU-eligible waste in the landfill. 40 CFR 264.555 requires that the receiving landfill incorporate into their permit through permit issuance or a permit modification (including providing public notice and an opportunity for public comment) applicable standards for CAMU-eligible waste.

In addition, the landfill must provide written notice to persons on the facility mailing list of the landfill's intent to receive CAMU-eligible waste. The impacts on the human environment resulting from receipt of CAMU-eligible waste at a landfill are evaluated by the government authority where the disposal facility is located.

Stipulations and Controls

Remediation at the refinery is governed by a hazardous waste permit based on requirements in Title 17, Chapter 53 of Administrative Rules of Montana (ARM). ConocoPhillips must comply with the permit conditions to be in compliance with Montana's hazardous waste laws and regulations.

Analysis of Regulatory Impacts on Private Property Rights

A Private Property Assessment Act Checklist was completed for this action and is on file at the DEQ. The DEQ determined that no taking or damaging implications exist requiring a further impact assessment.

Summary of Impacts

The checklist below was only completed for Alternative I and Alternative II. As noted above, Alternative III was not considered because the DEQ determined the alternative was unreasonable.

The human environment includes those attributes, such as biological, physical, social, economic, cultural, and aesthetic factors, that interrelate to form the environment. Impacts may be adverse, beneficial, or both. The following criteria are used to rate the impacts:

- ◆ The severity, duration, geographic extent, and frequency of occurrence;
- ◆ The probability the impact will occur if the proposed action occurs;
- ◆ Growth-inducing or growth-inhibiting aspects of the impact;
- ◆ The quantity and quality of each environmental resource or value effected;
- ◆ The importance to the State and society of each environmental resource or value effected;
- ◆ Any precedent set as a result of an impact from the proposed action that would commit DEQ to future actions with significant impacts or a decision in principle about such future actions; and
- ◆ Potential conflict with local, state, or federal laws, requirements, or formal plans.

The following are definitions for major, moderate, minor, none, and unknown impacts on the human environment:

Major: A significant change from the present conditions of the human environment. Major impacts are serious enough to warrant preparing an environmental impact statement (EIS).

Moderate: Not a major or minor change from the present condition of the human environment. A single moderate impact may not warrant preparing an EIS; however, when considered with other impacts, an EIS may be required.

Minor: A slight change from the present condition of the human environment. Minor impacts are not serious enough to warrant preparing an EIS.

None: No change from the present conditions of the human environment.

Unknown: An EIS must be conducted to determine the effects on the human environment if impacts are unknown.

Tables 1 and 2 rate potential human environment impacts from Alternative I and Alternative II.

Table 1. Potential Impacts on Physical and Biological Environment

Alternative I = X
Alternative II = O

Resources		Major	Moderate	Minor	None	Unknown	Discussion Attached
A.	Air Quality			O	X		*
B.	Water Quality, Quantity, and Distribution			O	X		*
C.	Geology and Soil Quality, Stability, and Moisture				X O		
D.	Historical and Archaeological Sites				X O		
E.	Aesthetics				X O		
F.	Terrestrial and Aquatic Life and Habitats				X O		
G.	Vegetation Cover, Quantity, and Quality				X O		
H.	Unique, Endangered, Fragile, or Limited Environmental Resources				X O		
I.	Demands on Environmental Resource of Water, Air, and Energy			O	X		*
J.	Cumulative and Secondary Impacts			X O			*

A. Air Quality

Under the approved remedy, the excavation, handling, and treatment of soil from the SOSP reuse project may result in an increase in fugitive emissions from the refinery. However, the activities will occur over a limited period and if done in compliance with air quality requirements, the impacts should be minor. The excavation and handling of soil from the SOSP reuse project will occur regardless of the designation of the waste as CAMU-eligible. The DEQ's designation of the waste, under Alternative I, will have no bearing on air quality during the remediation project.

Under Alternative II, designating the waste CAMU-eligible but requiring more rigid treatment standards, may result in additional management of excavated soil in comparison to Alternative I. This management may result in an additional impact to air quality during the remediation project.

B. Water Quality, Quantity, and Distribution

The approved remedy requires that soil be excavated and stored prior to treatment and/or shipment off-site. During remedy implementation, contaminated soil will be exposed and the potential exist for contaminated soil to be exposed to precipitation. A short-term adverse effect of the remedy may be the generation of contaminated water. However, soil piles are required to have run-on and run-off controls so any impacted water will be contained and properly managed.

If the waste is approved for disposal as CAMU-eligible waste in a permitted hazardous waste landfill, additional soil management from the approved remedy should not occur. The proposed action should have no additional impacts to water quality. Alternative II may require additional soil management in comparison to Alternative I. However, the impacts will not differ from those evaluated for the approved remedy.

I. Demands on Environmental Resources of Water, Air, and Energy

Excavation and treatment of the soil from the SOSP will have minor impacts on energy since heavy equipment will be required to perform the remedy. Alternative II's potential additional soil management in comparison to Alternative I may result in slight impacts to water, air and energy resources.

J. Cumulative and Secondary Impacts

Cumulative impacts are impacts that may be negligible or minor for a specific project or action under consideration, but collectively (many similar projects or actions) or incrementally may result in significant impacts. Secondary impacts are those occurring at a later time or distance from the triggering action. After completion of the SOSP remedy, the soils left on-site should not require any further maintenance or remedial action. The Department does not anticipate further projects of this magnitude at the refinery that would generate CAMU-eligible waste. The DEQ does not anticipate that Alternative I or Alternative II will result in significant cumulative impacts or any secondary impacts at the Billings' refinery.

However, under Alternatives I and II the hazardous waste will be shipped off-site. The disposal of the waste may impact the physical and biological environment where the landfill is located. Since the landfill must comply with the standards of 40 CFR 264, any impacts should be minor.

Table 2. Potential Impacts on Social, Economic, and Cultural Environment

Alternative I = X

Alternative II = O

Resources		Major	Moderate	Minor	None	Unknown	Discussion Attached
A.	Social Structures and Mores				X O		
B.	Cultural Uniqueness and Diversity				X O		
C.	Local and State Tax Base and Tax Revenue				X O		
D.	Agricultural or Industrial Production			X O			*
E.	Human Health			O	X		*
F.	Access to and Quality of Recreational and Wilderness Activities				X O		
G.	Quantity and Distribution of Employment				X O		
H.	Distribution of Population				X O		
I.	Demands for Governmental Services			X O			*
J.	Industrial and Commercial Activity				X O		
K.	Locally Adopted Environmental Plans and Goals				X O		
L.	Cumulative and Secondary Impacts			X O			*

D. Agricultural or Industrial Production

The approved remedy facilitates the use of the space for reuse. Approving the waste for disposal in a landfill as CAMU-eligible waste will facilitate economical management and disposal of the hazardous waste. Therefore, the proposed action is a benefit for industrial production. Under Alternative II, if excavated soil does not meet the stricter treatment standard, further soil treatment may be necessary. The additional treatment may result in additional remediation cost. Alternative II may have a small negative impact on the cost of the project.

E. Human Health

Under the approved remedy, excavation, handling, and treatment of the soils may expose on-site workers to contaminated soil. However, the impacts should be limited. ConocoPhillips must comply with Occupational Safety and Health Administration (OSHA) regulations including those for hazardous waste operations. Mitigation of exposure may include personal protective equipment, dust suppression, and air monitoring. ConocoPhillips is required to comply with applicable air quality regulations that are protective of ambient air quality surrounding the refinery. Therefore, the approved remedy should not

negatively affect the surrounding community. The approved remedy will result in a reduction in the long-term human exposure potential because the toxicity, mobility, and volume of contaminated soil will be reduced.

Designation of the waste as CAMU-eligible under Alternative I should not result in any additional impacts to human health than what was evaluated for the approved remedy. Alternative II may result in more soil management than Alternative I. Minor impacts to human health are possible from Alternative II.

I. Demands for Governmental Services

The requirements of 40 CFR 264.555 will require that governmental service be used at the location of the receiving landfill. The tasks that the government undertakes are prescribed in the regulations and are not onerous. It is possible that the DEQ may be contacted by the receiving landfill's regulators. Therefore, minor impacts to governmental services are anticipated.

L. Cumulative and Secondary Impacts

The Department does not anticipate further remediation projects of this magnitude at the refinery that would generate CAMU-eligible waste. Although reuse of this site may increase or improve the production at the facility, designation of the waste as CAMU-eligible should have no secondary impact to industrial and commercial production or activity.

Cumulative and secondary impacts on social, economic, and the cultural environment at the receiving landfill under Alternative I and Alternative II are possible. Since the landfill is a permitted facility, the impacts should be minimal and managed under the facility's permit.

Individuals or Groups Contributing to EA

Montana Department of Environmental Quality

Draft EA Prepared

Denise A. Kirkpatrick
March 20, 2008

Recommendation

Based on the EA analysis, the DEQ recommends Alternative I (the proposed action). Alternative I has less potential impacts than Alternative II. In addition, ConocoPhillips has submitted sufficient information to the DEQ to approval of the request for waste disposal pursuant to 40 CFR 264.555(a)(1) through (3), incorporated by reference in ARM 17.53.801. The Department believes that the adjusted treatment standards for the soil's principal hazardous constituents are protective of human health and the environment given the engineering design of a landfill permitted to receive CAMU-eligible waste.

The EA is an adequate level of environmental review; an EIS is not required. The EA analysis demonstrates that this State action will not be a major action significantly affecting the quality of the human environment.